

The meaning of the English present participle¹

While earlier descriptions of the English present participle have tended to be too general or too exclusively focused on its progressive meaning, this paper aims to present an account of the meanings of the English present participle that captures their full richness. It starts from the observation that many (though not all) present participle clauses/phrases are paradigmatically related to adjectival phrases, as manifested in their distributional properties (e.g. *a challenging year*, *those living alone*). The paper analyzes the semantic effects that arise from the tension between the verbal semantics of the participial stem and the adjectival semantics of the syntactic slot. These effects involve accommodation of the verbal situation to the requirement that a situation is represented as time-stable and as simultaneous to some contextually given reference time. The progressive meaning is one such semantic effect, but participles may also assume iterative, habitual or gnomic readings. Some construction-specific semantic extensions of this adjectival template are identified and a tentative explanation is offered for them. Those constructions where the present participle has lost its semantic association with adjective phrases, such as the progressive construction and integrated participle clauses are shown to display loosening or specialization of semantic constraints.

1. Introduction

Sometimes descriptive vagueness hides a theoretical challenge. This is true, for example, of the meaning of English present participles – the (de)verbal *-ing*-forms illustrated in (1).

- (1) a. It was a lovely sight to see all the *sleeping* hens on their perch (BNC)
- b. Another vital factor *affecting* our climate is the wind. (ICE-GB)
- c. See them *trying* to run like bears. (COCA)
- d. “He is afraid for his life and I don't know if I will see him again,” she said, *breaking* into sobs. (CB)
- e. An era is *slipping* past. (COCA)

¹ This paper forms part of a broader research project on the semantics of participles and gerunds. Hendrik De Smet wrote it out in close collaboration with Liesbet Heyvaert. A second co-authored article on the semantics of gerunds is currently being written out by Liesbet Heyvaert. Earlier versions of this paper were presented at the 1st ISLE conference which took place at the University of Freiburg in October 2008 and at the 3rd ICLCE conference held at University College London in July 2009. The authors would like to thank the participants at these conferences for their questions and feedback. They are also very grateful to Bas Aarts and the two anonymous referees for their detailed comments and insightful remarks which have improved the paper significantly. Finally, Hendrik De Smet acknowledges the financial support of the *Research Foundation – Flanders*.

Collecting some of the descriptive statements characterizing the meaning of present participles² produces a confusing and plainly incomplete picture. One recurrent observation is that participles express some kind of simultaneity. Jespersen (2006 [1933]: 197) is the first to point this out:

In all cases like

He came, (carrying a heavy burden on his back—)

He comes, (carrying a heavy burden on his back—)

He will come, (carrying a heavy burden on his back—)

we have a vague simultaneity with something else, rather than any definite reference to one particular time.

Wierzbicka (1988: 61) is more categorical: “The participial clause implies simultaneity”.

Another general observation is that some but not all participles express progressive meaning, i.e. presenting the situation that is referred to as “in progress, ongoing” and viewing it imperfectly (Huddleston and Pullum 2002: 163). Thus, Quirk et al. (1985: 238) write:

the *-ing* participle itself is not, in spite of its appearance, necessarily associated with the progressive [...]. Nevertheless, there are constructions in which the *-ing* participle construction has aspect contrast with the infinitive, and is progressive in meaning [...].

Declerck (1991a: 449) associates progressiveness with the participles of dynamic verbs, saying nothing about non-dynamic verbs:

present participle forms of dynamic verbs express progressive aspect (and can therefore be seen as reductions of a phrasal participle involving *being*):

e.g. I noticed him leaving the room. (=I noticed him being leaving the room.)

Huddleston & Pullum (2002: 1222) state that participles “do not always have progressive meaning”, implying that sometimes they do. For example, in *people earning this amount*, they find that the participle “neutralizes the distinction between *people who are earning this amount* and *people who earn this amount*” but for *Liz was lying by the pool reading a novel* they find that the participle *reading* “is interpreted with progressive aspectuality: “she was reading a novel”.” (2002: 1265).

Statements of this kind are not grossly incorrect, but they lack important detail. As we will argue, the idea that participles express simultaneity accurately characterizes most participial uses. How-

² Henceforth ‘participles’. Note further that, unless stated otherwise, the term is used here to refer to the whole structure of which the (de)verbal form in *-ing* is the head.

ever, Jespersen’s observation that this simultaneity is “vague” (2006 [1933]: 197) calls for further specification, as it (correctly) suggests that not all participles express simultaneity in the same way and even that some might not express simultaneity at all. For example, the participle *bursting* in (2) is not strictly simultaneous to the higher clause process *leave in its wake*:

- (2) a *bursting* bubble can leave in its wake a ring of smaller bubbles (Google)

The idea that participles express progressive meaning is more problematic. Quirk et al. (1985), Declerck (1991a) and Huddleston & Pullum (2002) all take pains to qualify this generalization, recognizing that many participles are not progressive in meaning, but they do not explain under which conditions the progressive meanings arise. Only Declerck (1991a: 449) suggests a rule when claiming that it is the participles of dynamic verbs that are progressive, but this quickly turns out to be inadequate as a generalization. For example, *marrying* in (3), although a dynamic verb, does not denote an ongoing action:

- (3) I’m not a *marrying* sort of man (PG-N)

In what follows, we aim to present a much more detailed picture of the meanings expressed by English present participles. At the same time, we develop a framework that can explain when and why different semantic effects arise. The core assumption is that the meaning of participles can be best understood against the background of the syntactic slot they fill. Specifically, we start from the observation that present participles often occupy the position of an adjective phrase in the higher clause. Different semantic effects arise from the tension between the verbal semantics of the participial stem and the adjectival semantics of the syntactic slot. At the same time, this situation is complicated by the fact that in specific constructions the link between participles and adjectives may become obscured. Section 2 presents a blueprint of this general framework and its theoretical foundations, while Section 3 applies it to a number of different participial constructions. A summary is given in Section 4.

The following discussion is almost entirely based on genuine examples, as only these fully reveal the variety of meanings that participles can express. The examples have been drawn from corpora and the internet. The main sources of corpus examples are the *British National Corpus* (BNC), the old 57-million word version of the *Collins Cobuild Corpus* (CB) and the *Corpus of Contemporary American English* (COCA). The full list of sources is given at the end of this paper. Internet examples have been collected using *Google*, taking care to include only examples that we could with reasonable confidence attribute to native speakers. Hyperlinks to the internet examples, together with the date of last access, are listed at the end of the paper. Given that our primary aim is a qualitative assessment and explanation of the semantic potential of English present participles, we have not quantified our data.

However, to guard against major oversights, we have checked our claims on specific participle constructions against samples drawn from the British component of the *International Corpus of English* (ICE-GB), whose fuzzy tree fragment search interface allows construction-specific searches. More detailed information on these searches is provided in the footnotes to Section 3 where relevant.

2. Assumptions

Our framework for understanding the meaning of participles builds on a number of principles. First, we propose that participles maintain a paradigmatic relation to adjectives. Second, we propose that this has semantic consequences. Third, we propose that the link between participles and adjectives can become obscured, with potential consequences for the semantics of participles. Sections 2.1-2.3 below develop each of these points in more detail. Finally, in Section 2.4 we propose that these principles suffice to derive the meaning of present participles, so that the contribution of the *-ing* suffix itself is probably best thought of as restricted and vague.

2.1. Participles, gerunds and the parts of speech

Participles are not the only *-ing*-form of the verb, gerunds being inflectionally identical. As a consequence, whether or not it makes sense to treat participles as a separate category is a recurrent point of disagreement. The main reason for upholding the distinction is that the constituent of which participles are the head stands in a distributional correspondence to an adjective phrase – a property not shared by gerunds, which are nominalizations (Jespersen 1940; Declerck 1991a: 447). Thus, the *-ing*-forms in (4) are participles; those in (5) are gerunds. The difference is obvious enough when the participle is itself an adjective, as in (4a), and the gerund is a noun, as in (5a). It is somewhat less self-evident when the participle and the gerund function as the head of a clausal structure (including a subject and/or objects, adjuncts, etc.), as in (4b) and (5b). In (4b) and (5b) it is the positions occupied by the participle and gerund in the higher clause that distinguish them from one another: the *-ing*-clause in (4b) fills the slot of an attributive (postnominal) adjective phrase, whereas that in (5b) fills the slot of a direct object noun phrase.

- (4) a. It'll be a very *challenging* year for volunteers, I'm sure you'll all agree. (BNC)
- b. Hello. Hello! Excuse me, to the people *doing* this, what's it, this project? (BNC)
- (5) a. But some *melting* of the glaciers is certain. (CB)
- b. He considered *leaving* on the first train in the morning. (BNC)

This distributional argument for treating gerunds and participles as categorially distinct clause structures has been questioned (Huddleston & Pullum 2002). It is true that there is a certain circularity in justifying the gerund-participle distinction on distributional properties alone. For example, it is inappropriate to first decide that those *-ing*-clauses corresponding to adjective phrases are participles and then prove the existence of participles by pointing to their distributional correspondence to adjective phrases. The positional correspondence of some *-ing*-clauses to adjective phrases and of others to noun phrases does not in itself guarantee that language users perceive these correspondences and use them to draw categorial divisions. Especially for participles, this problem is compounded by the fact that, even though participles historically derive from adjectives (Swan 2003), the syntactic correspondence to adjective phrases is sometimes disputable in Present-day English (see further Section 3 below).

However, De Smet (2010) surveys the evidence for and against the gerund-participle distinction and concludes that the relations between participles and adjectives on the one hand and gerunds and nouns on the other are confused but not obliterated. More generally, *-ing*-clauses sometimes show signs of behaving as a single unified category, even while evidence to the contrary is available as well. For example, the genitive subject exclusively found with gerunds suggests categorial discreteness between gerunds and participles. Yet, at the same time, various instances of analogical feature exchange in the history of gerunds and participles, whereby a feature of one clause type is transferred to the other, suggest an overarching unity across all *-ing*-clauses. For instance, the extension of *of*-marked patients from gerunds to participles in Early Modern English indicates at least some degree of leakage between the two categories. One of the most persuasive illustrations of this muddled state of affairs is the present-day variation between /ɪŋ/ and /ɪn/ realizations of the *-ing*-suffix, attested in all *-ing*-forms. As /ɪŋ/ is the historical gerund ending, and /ɪn/ probably derives from the historical participial ending, present-day variation presents a case of extension of a participial feature into gerundial contexts and vice versa. However, the variation continues to be grammatically conditioned, such that it reflects the old distinction between gerunds and participles, thereby still supporting the existence of these generalizations (Houston 1985; Labov 1989). In sum, the distributionally defined categories of participles and gerunds remain relevant generalizations to language users, even though they are at times lowly salient and violable, competing with a more unified analysis of *-ing*-clauses.

Our analysis of the meaning of participles both builds on and supports this general view. That is, we embrace the possibility of synchronic categorial ambivalence. On the one hand, we argue that much about the meaning of participles can be understood simply by assuming that participles fill, or used to fill, the slot of an adjective phrase and participate in the semantic characteristics that come with such slots. A similar argument has been mounted for the relation between gerunds and noun phrases by Heyvaert (2008), who proposes that the interpretation of gerund clauses closely follows the semantics of the noun phrase. In this way, the semantics doubly supports the categorial status of participles and offers a way of breaking through the circularity of purely distributional evidence. First, a set

of meanings is identified that recurrently associate with participles, providing a semantic motivation for categorizing participles together. Second, if these meanings can be accounted for by assuming a link between participles and adjective phrases, this underscores the original distributional grounds for positing the category of participles. On the other hand, the tie between participle and adjective is not necessarily robust. The meanings of participles in specific constructions may change in ways irreconcilable with (or unpredictable from) the syntactic slot the participle appears to fill. Where this is the case, participles automatically begin to lose their semantic association with adjective phrases and potentially diverge from one another as well. Both these processes eat away at the relevance of a unified category of participles. Just as for *-ing*-clauses in general, then, the evidence points both ways. Rather than force a decision, we assume that this contradictoriness reflects the way language users handle abstract grammatical categories (cf. Bybee & McClelland 2005; Goldberg & Del Giudice 2005).

2.2. Participles and adjectival semantics

As the above discussion implies, the major participial uses paradigmatically alternate with the major uses of adjective phrases, although the link to adjectives is clearer in some cases than in others. On distributional grounds, the following uses can be classified as participial (following traditional description, e.g. Jespersen 1940; Declerck 1991a; Swan 2003). First, participles can premodify a noun, occupying a typically adjectival position, as in (6).

- (6) a black, huddled shape, like a *sleeping* animal (BNC)

Second, if an attributive participle heads a clausal structure, it postmodifies the head noun, as in (7) – a position that is also occupied by what Huddleston & Pullum (2002: 528) describe as the ‘postpositive’ use of adjectives (e.g. *someone happy*; *a man full of his own importance*).

- (7) The man *standing* in the middle of the room will remain anonymous. (BNC)

Third, participles can be used as supplementives, as in (8). This use alternates with the predicative adjunct use of adjectives (among other phrase types) (Huddleston & Pullum 2002:529).

- (8) *Working* up her courage, she raced back down the beach to the egg, put her head and one shoulder against it, and shoved hard. (COCA)

Fourth, participles can complement perception verbs, as in (9).

- (9) And have you heard it *crying* at night? (BNC)

Note that the adjectival alternates to the latter two constructions are attested, as shown by (10), though comparatively rare.

- (10) a. Always *generous*, he invited her to drink coffee in the evening and she never saw him drunk. (BNC)
b. The line was not dead – she could hear it *alive*, hissing slightly, resonating as though there were someone the other end. (CB)

The three participial constructions in (6)-(8) are to be discussed in more detail in the following sections. The participles complementing perception verbs present a particularly complicated situation, which is discussed elsewhere (De Smet in prep.). At the same time, the present discussion is to address so-called integrated participle clauses (De Smet *forthc.*). These are non-nominalized subject-controlled complements to a rather diverse set of complement-taking predicates. They lack a functionally equivalent adjectival alternate, but historically derive (mostly) from participles. As such, they present an interesting test case for our claim that participial semantics are linked to the adjectival slot participles fill, because if a slot is no longer recognizable as adjectival, the constraints adjectival semantics impose are expected to disappear. An example is given in (11).

- (11) You have no right *calling* us names. (COCA)

Finally, participles can be used in the progressive construction, as in (12). This use historically derives from a predicative construction with copular *be* but, like integrated participle clauses, the participles in the progressive construction have lost their paradigmatic link with adjective phrases (just as *be* has been reanalyzed from a copula to an auxiliary). As such, they present another interesting test case for our analysis.

- (12) He must have been *looking* for [the] bathroom. (BNC)

The adjectival positions filled by participles are assumed here to come with predictable interpretational constraints. First, the adjectival slot imposes time-stability (see, among others, Givón 1984; Croft 1991, 2001). Second, because adjectivally encoded time-stable properties are not tensed, they tend to be interpreted as involving simultaneity (i.e. no temporal difference to the rest of the clause). When a verb is used in an adjectival slot its interpretation is subjected to these two constraints. Notice here that both time-stability and simultaneity are relative concepts. If a property is time-stable, it is

unchanging over some period. If it is simultaneous, it is simultaneous to some temporal reference point. In other words, interpreting an adjective consists in relating it to some contextually available reference time. The same will hold for participles.

Even in adjectives, time-stability and simultaneity have different manifestations. Concerning time-stability, the relevant reference time may be long and unbounded or short and bounded. For example, time-stability may involve full coextensiveness between a property and the existence of its carrier (*a wooden toy*, where woodenness is a permanent property of the toy), or stability of the property over a contextually determined period (*we had never seen her so angry before*, where the state of anger extends over a specific period of time which includes the period of seeing).

Concerning simultaneity, the relevant reference time may be the time encoded by the higher clause or be evoked by some other contextually prominent temporal perspective. In non-attributive uses, the state an adjective denotes normally spans at least the time frame evoked by the clause. For example, in *a man burst in naked*, the subject's state of nakedness is simultaneous to the bursting in (but it is of course likely that the man was naked at least some time before bursting in and he may remain naked for some time after it). In attributive uses, the situation is more complicated, because the referent of the head noun phrase can impose its own temporal perspective. For example, it may evoke its own time frame of existence, extending beyond the time of the clause, or may not be instantiated in the spatio-temporal space evoked by the clause. The first situation is illustrated in *the poor man is now a famous physician*. Here, *poor* is not simultaneous to the time of being a famous physician, which is possible because the referent's existence stretches beyond the time frame of the clause – simultaneity is not violated but relegated to an earlier encounter with the referent that is part of the common ground in the speech situation. The second situation is illustrated in *I want a black cat*. Here, indefinite non-specific *cat* presupposes no concrete cat next to the concrete first person subject and the temporally instantiated state of wanting. The attributed state of blackness is not simultaneous to the wanting in the higher clause, being linked only to the timelessness of its nominal head. Apart from such exceptions, which arise under special circumstances, simultaneity between the state denoted by an attributive adjective and the time frame evoked by the clause is still the rule (e.g. *a naked man burst in*).

Turning to participles again, when adjectival constraints are imposed on a verb, the main difficulty is to reconcile the often dynamic semantics of a verbal process with the time-stability associated with adjectives. This tension between verbal and adjectival semantics, we will argue in Section 3, can be resolved by taking one of (at least) four aspectual perspectives that we also find at finite clause level. The verbal process can be construed as progressive, iterative, habitual or gnomic. Progressive construal consists in a zooming in on the verbal process, so that only the inner phase of the process is profiled (e.g. *a man was pushing a safe across the road*). Beginning and end having been excluded, the inner phase of a process can be conceived of as an unchanging (if temporary) state of 'ongoingness', thus fulfilling the temporal stability requirement (Huddleston & Pullum 2002: 163; Declerck

1991a: 157-158). The other three construals involve some form of zooming out from the verbal process. An iterative construal presents the verbal process as taking place repeatedly in immediate temporal succession (e.g. *Someone was tapping on the window*, Declerck 1991a: 57). A habitual construal presents the verbal process as taking place repeatedly and predictably, though without immediate temporal succession (e.g. *He would often come and talk to her when he had finished working*, Declerck 1991a: 56). A gnomic construal, finally, presents the process as the predictable behaviour of a nominal referent but abstracts away from any concrete occurrences. Gnostic sentences therefore subsume generic sentences (e.g. *knives cut*) but also allow for their subject noun phrase to refer to a concrete instance instead of a class (e.g. *this knife cuts wood*).³ In iterative uses, temporal stability lies in the repetition; in gnomic uses in the permanence of characteristic behaviour; habitual uses are positioned between these two extremes.

In summary, assuming that the interpretation of participles is constrained by the semantics of their adjectival position in the higher clause, participles are predicted to present a verbal process as time-stable and simultaneous. Where this conflicts with the dynamic meaning of the verbal stem, a number of different strategies may be resorted to in order to achieve time-stability. As we demonstrate below, these general principles can account for the meanings of the great majority of participles attested in actual usage. At the same time, there are distorting factors that complicate their workings.

2.3. Historical and systemic complications

The picture of participial semantics meets several complications. The most important type of complication is historical. As hinted above (section 2.1), non-finite clause types that derive from adjective phrases and noun phrases historically tend to get further and further dissociated from their phrasal ‘parent’ constructions. The process of semantic and syntactic dissociation is familiar from other areas of the grammar. For example, it routinely affects the lexical semantics, along with the degree of compositionality, of morphologically complex words by distorting the relation between stem (e.g. the *aw* in *awful*) and free word (*awe*) (Bybee 1985). In the case of participles, when the link to adjective phrases ceases to be recognized by language users, a number of things may happen to the meanings participles ordinarily convey.

On the one hand, the meanings originally imposed by the adjectival slot may simply remain associated with the participle. A morphological analog to this situation would be a complex word whose meaning remains transparently related to its stem on conscious analysis, even though in normal use it is no longer actively (de)composed by the language user. Even though nothing happens on the surface, analysis is complicated because, granted this possibility, it is impossible to know at which

³ The term ‘gnomic’ has been borrowed from Declerck (1991a: 55; 1991b: 282-4). Our definitions differ slightly, however, in that Declerck appears to subsume habitual sentences under gnomic sentences.

level of grammatical representation meaning resides. But the complication is primarily methodological: we simply cannot tell whether meaning is constructionally inherited (in the construction grammar sense, cf. Goldberg & Jackendoff 2004) or historically inherited.

On the other, once the tie between adjective and participle has become opaque, meanings *can* change and may in doing so violate the expectations that are associated with the original syntactic status of participles as being akin to adjective phrases. The morphological analog to this situation is complex words whose meaning is only vaguely associated with the meaning of the composing elements. Developments may still take different turns from here, either toward semantic generalization or toward semantic specialization. As we will argue for integrated participle clauses, the constraints imposed by the adjectival slot may simply be lifted, in which case the participle ceases to denote temporal stability and simultaneity. Or, as we will show for attributive and supplementive uses and for the progressive construction, participial meanings may undergo further construction-specific specialization, in which case new meanings may be added to the original stock that can no longer be derived from an assumed adjectival slot.

The possibility of semantic change explains the absence of hard-and-fast generalizations in most contexts, as counterexamples can be expected and explained. However, without corroborating evidence such explanations remain more or less *ad hoc*. In the following discussion, therefore, explanations in terms of semantic change are conferred plausibility by suggesting a plausible pathway of change from the available data.

A more subtle type of complication is systemic, having to do with the specific construction a participle is used in and its relation to other constructions. Even if participles are all subjected to the basic constraints imposed by their adjectival position, they can occur in different constructions. How the participle functions within the higher clause thus varies. As we will suggest, these differences between participial functions may also manifest themselves in construction-specific pathways of semantic extension. Likewise, there is variation in the alternation patterns that participles enter into with other constructions within the same functional domain. All this may bias interpretations. For example, it is likely that the interpretation of participles in the progressive construction is codetermined by its paradigmatic relation to the simple tense construction (see further section 3.5).

2.4. *The meaning of the -ing-suffix*

Before we move on to the discussion of the meaning of the various constructional uses of the present participle, a word is in place regarding the meaning of the suffix *-ing* (for a more detailed discussion, see De Smet & Heyvaert 2009). We will assume here that the *-ing*-suffix does not impart much meaning to the participial construction, at least not in terms of the familiar TAM categories (i.e. categories to do with Tense, Aspect and Modality). This goes against the treatment of *-ing* as a progressive suffix

by Langacker (1991) and other cognitive linguists in his wake (e.g. Smith and Escobedo 2002, Egan 2008). We believe that attribution of progressive meaning to the suffix *-ing* is both unnecessary and problematic. It is unnecessary because progressive meaning can be understood as a response to the demands of temporal stability imposed by the adjectival slot. It is problematic because many participles (and even more gerunds) simply are not progressive in meaning, as is to be amply demonstrated below. In somewhat similar fashion, Wierzbicka (1988) suggests that it is *-ing* that expresses simultaneity (at least, for her all *-ing*-forms express simultaneity, including gerunds, implying that simultaneity is not constructionally inherited). This view too, however, is unnecessary and problematic, on the same grounds as Langacker's proposal. In general, then, we assume that *-ing* does not contribute any TAM-related meaning to the participial construction.

We do not claim by this that *-ing* must be meaningless or functionless. However, its main role is in our view restricted to 'atemporalizing' the verbal process it attaches to, thus neutralizing it as a temporal and aspectual event and forcing the details of the event to be derived from the lexicogrammatical context in which it is used. Functionally speaking, *-ing* is almost exclusively associated with subordination and therefore with verbal processes that are backgrounded in the discourse (see, among others, Huddleston and Pullum 2002: 89 on subordination). Finally, *-ing* obviously signals syntactic relations, marking the very fact that some form is (or may be) a participle filling an adjectival slot. As such it does have its role to play in the interpretative process by which the meanings of participles arise.

3. Analysis

The most unproblematically adjectival position is the attributive slot occupied by prenominal participles and we will therefore take this syntactic position as the starting point of our discussion, showing the impact of time-stability and simultaneity on the interpretation of participles, and the pragmatic factors that interact with these constraints to produce specific contextualized interpretations (section 3.1). The sections that follow, discussing postnominal participles (section 3.2), supplementives (section 3.3), integrated participles (section 3.4), and the progressive construction (section 3.5), provide further evidence of the general explanatory framework or discuss construction-specific complications.

3.1. Prenominal participles

Prenominal used participles display a high degree of interpretational flexibility, which is nevertheless confined by the semantics of the adjectival slot. The following examples illustrate the range of

meanings attested.⁴ In (13a) *slanting* is used statively, describing a stable spatial configuration. In (13b) the dynamic verb *sinking* will be interpreted as progressive: the *vessel* is represented as being in a state of sinking, and the limits of the sinking process are not included in the predication (we do not know from (13b) whether the vessel actually sank). In (13c) *stealing* is most likely to be interpreted as habitual (a *stealing husband* is a husband who steals regularly). In (13d) *ticking* is iterative. In (13e), finally, *damaging* denotes a lasting state of affairs: a *damaging report* is simply a report that inflicts or can inflict damage.

- (13) a. [The article] [d]escribes a *slanting* deer fence that requires less wire mesh and shorter posts than the standard upright deer fence. (Google)
- b. survivors were pulled from the *sinking* vessel (Google)
- c. we have watched religiously as Kathy kept moving forward after botched plastic surgery, a divorce from a *stealing* husband, and the death of her beloved father. (Google)
- d. police were called at 8:30am after the *ticking* parcel was found on the 10th floor. (Google)
- e. the company tumbled almost overnight from market darling to market pariah with the publication of a *damaging* report by David W. Tice (Google)

The different readings illustrated in (13) are all simultaneous and time-stable in the sense that the participle denotes a state that can perpetuate without change for some time and that holds at some contextually implied temporal reference point. Time-stability holds true for stative *slanting* in (13a), and also applies to the progressive, habitual, iterative and gnomic readings in (13b-e). As to simultaneity, (13b) is the most straightforward example, as the sinking in (13b) must be ongoing at the time of the rescue. For *stealing* in (13c), a time frame over which the characterization by the participle minimally holds is evoked by the action nominal *divorce*. *Ticking* in (13d) must at least be simultaneous to the time established by *was found*. *Damaging* in (13e) denotes a lasting characteristic of the report ('having the potential to damage'), which holds also at the time evoked by the action nominal *publication*. Finally, as a *slanting deer fence* in (13a) refers simply to a type of fence, the interpretation of *slanting* does not have to be aligned with the concrete spatio-temporal context of the main verb *describes*. Within its own referential space, however, it is simultaneous to the rest of the type description accompanying *fence* (viz. the relative clause *that requires...*).⁵

⁴ The findings have been confirmed on the basis of a 276-hit sample (i.e. 18% of the total number of hits), including false hits, from ICE-GB, using a search for any *-ing*-forms contained as adjectival head inside a noun phrase.

⁵ The ICE-GB sample produced the following potential counterexample: *the model may be developed through interactive changes to the program until the developer regards the resulting computations as sufficiently interesting or relevant* (ICE-GB). *Resulting* here could be read as denoting a bounded event ('the computations that resulted from the changes') but it could also be read as denoting a stable temporal or causal configuration, in

The examples under (13) show the predicted semantic behaviour of participles. The example in (14) is more problematic, however. *Exploding* in (14) allows two readings. On its first ‘inherent potential’ reading, it resembles *damaging* in (13e), likewise allowing a gnomic paraphrase (‘(be careful,) this cigar explodes’). Because the gnomic reading abstracts away from any concrete instantiations of the verbal process, *the exploding cigar* may never have exploded, so *exploding* denotes simply an intrinsic potential.

- (14) While the *exploding* cigar that was intended to blow up in Castro’s face is perhaps the best-known of the attempts on his life, others have been equally bizarre. (Google)

On its alternative reading, however, *exploding* denotes a single specific bounded event (the cigar did explode). In this use, it is equivalent to examples such as (15), forming an exception to the time-stability requirement.

- (15) The *disappearing* mayor of the French Riviera resort of Nice, Honore Baillet, 73, made his first public appearance in five weeks yesterday by turning out to vote in the first round of France’s parliamentary elections, AFP reports from Nice. (Google)

No temporal stability is achieved. Instead, *disappearing* in (15) evokes a single specific bounded event whose actualization is seen as completed. This use is therefore neither time-stable, nor is there a temporal reference point to which the participial event is simultaneous.

Participles such as those in (14) and (15) occur under special conditions. The event denoted by the participle is highly accessible and remains closely associated with the nominal referent it is attributed to, having the quality of a mark left on the referent in collective memory. Consequently, the use is acceptable only if the process denoted by the participle is somehow noteworthy enough to remain discursively prominent, allowing the participial process to be interpreted as permanently accessible common knowledge. In indefinite NPs the effect is slightly different. While the process denoted by the *-ing*-form lacks discursive prominence in the actual discourse in which it is introduced, it is singled out by means of the *-ing* form as designating a discursively new event that is noteworthy. The use is therefore easily exploited to add descriptive flavour, as in (16).

analogy to the stable spatial configuration in examples like (13a) above. *Result* is then used statively and the appropriate reading is ‘the computations that (automatically) result from the changes’. *Resulting* could also be read as denoting an ongoing situation simultaneous to the higher verb *regards*. The second and third readings pose no problems to our analysis. The first might be a lexically-specific violation of the expected semantics of participles. The same ambiguity is often found in phrases like *the following day* or *the ensuing question*.

- (16) Ricardo was an underemployed aristocrat and former racing driver (his record: one victory, one *exploding* engine). (Google).

Finally, to appreciate the ‘noteworthy event’ connotation of the present participles in (14)-(16), it is revealing to compare *disappearing* in (15) to the past participle *disappeared* in (17), which lacks the implication that the event of disappearing has been remarkable enough to linger on in collective memory.

- (17) Archeologists prize middens as windows into the *disappeared* people and their culture. (COCA)

The ‘noteworthy event’ reading can, at least synchronically, be thought of as an extension of the progressive reading. Often the precise duration of an event is unclear, as in (18), where *arriving* can either be thought of as the punctual event of reaching a specific destination or may be stretched out to include the time required for being welcomed and invited to another activity.

- (18) *arriving* guests are invited to come into the reception room and watch the pictures being made of the wedding party. (Google)

What this illustrates is that an event can ‘reverberate’ for some time, and may not have a precisely determined termination point. In this view, *arriving* in (18) could be construed as still ongoing at the time established by *are invited* (a similar example is given in (2) above). The participial process is then presented as though it is ongoing at the time of the rest of the action in the main clause – a situation described by Declerck (1991a: 132-4; 1991b: 41) as ‘sloppy simultaneity’. The noteworthy event reading, as in (15) above, goes one step further, in that the laxness of event boundaries is exploited to the point that no pretence of simultaneity is maintained and an event is presented as so impactful that it reverberates even after termination.

The choice between different readings for attributive participles is determined by a variety of pragmatic factors. World knowledge suggests likely interpretations for particular participle-noun combinations. Some verbal processes are known to be intrinsically non-recurrent (the sinking of a ship, the explosion of an engine), which will tend to rule out a habitual/iterative reading. Processes that are punctual (the ticking of a clock) will resist a progressive reading, often favouring iterativity instead, whereas processes known to affect their argument referent slowly and gradually (the decaying of a house vs. the decaying of an atom) will invite the progressive reading. Although, in this way, certain participle-noun combinations are biased towards specific interpretations, another important contribution to the interpretation of an attributive participle is made by the relation of its process to other

processes in the context. This is made clear by the examples in (19), where the same participle-noun combination receives three different interpretations: noteworthy event / sloppy simultaneity in (19a), progressive in (19b), habitual / progressive in (19c).

- (19) a. The *winning* team received a bronze copy of the tournament mascot.
 b. The *winning* team is leading by five points.
 c. Never change a *winning* team.

In the interpretative process, the goal is generally to maximize the causal and temporal integration of the events in the discourse into a maximally precise and coherent picture of the world described. In practice this means connecting the participial characterization to some specific state of affairs that can be linked to other implied or explicit states of affairs in the discourse. On the one hand, there are contexts that do not suggest any temporal relation between the process evoked by the participle and other processes. The resultant readings in such cases are the gnomic and habitual readings. The prenominal participles of transitive verbs, like *decapitating* in (20), are typically used with gnomic meaning. Probably because they lack the grounded secondary participant they normally combine with, they are automatically much less suggestive of a concrete temporally situated event.

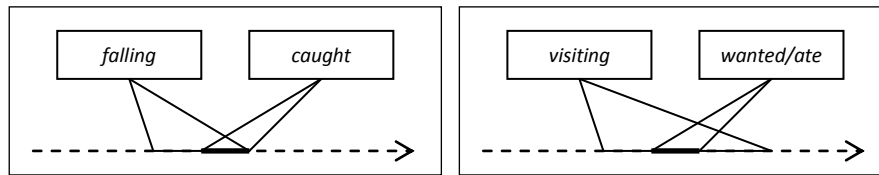
- (20) The surgeon Antoine Louis is credited with perfecting the angled design of the *decapitating* blade. (Google)

On the other hand, there are contexts that do describe an event with respect to which we can situate an instantiation of the process evoked by the participle. This is the constellation in which progressive (as in (21a-b)) and iterative readings (as in (21c)) arise. The participial process then offers a background against which the main clause process unfolds, as schematized in (22). Interpretationally, the contextual availability of an orientation time commensurate with the progressive state is a necessary condition for the progressive reading to be fully interpretable (cf. Declerck 1991a: 276 on the progressive tense). Communicatively, temporal inclusion of one (prominent) event within another (backgrounded) event is often also what makes focusing on the interior of the encompassing event interesting in the first place (cf. Killie 2008 on focalizing progressive constructions in Old English, or Strang 1982 on the use of the progressive construction in Late Modern English novels).

- (21) a. Panicked, the man threw himself out the window and slid headfirst down the ladder toward Bain. The experienced firefighter held his balance and caught the *falling* man, helping him down the rest of the ladder and into the care of waiting rescue teams. (Google)
 b. I finally ate there when a *visiting* friend wanted to have Greek salad for lunch. (Google)

- c. Police were called at 8:30am after the *ticking* parcel was found on the 10th floor.
(Google)

(22)



It is interesting to note that these interpretative choices correspond neatly to choices that have to be made in the interpretation of ordinary attributive adjectives. Specifically, the interpretation of an attributive adjective involves working out whether it denotes a permanent/inherent characteristic or a temporary/transient state. Consider *red-faced*, which denotes a permanent characteristic in (12a) but more probably a transient one in (23b):

- (23) a. The master, a *red-faced* man with a pleasant voice, was called Rice (Google)
b. A *red-faced* man, slamming the cabin door behind him and stumping out on the deck, interrupted my reflections (Google)

Likewise, the temporally stable state of affairs denoted by an attributive participle can be permanent (gnomic or habitual readings) or transient (progressive and iterative readings). What this shows is that some degree of interpretative flexibility is inherent in adjectives, so that the various interpretations attested in attributive participles can in part be regarded as a specialized response to the normal demands of adjective interpretation.

What we see from the above is that the meanings of attributive participles are constrained in ways that largely make sense in the context of the syntactic slot in which they occur. As with attributive adjectives, there is simultaneity and time-stability that run through the various uses attested, though manifesting themselves under different guises. Moreover, different interpretational possibilities partly reflect the choice between permanent and transient states that also characterizes adjectives. The one violation, found in participles denoting past noteworthy events, can be explained as a semantic extension from progressives with sloppy simultaneity.

3.2. Postnominal participle clauses

While postnominal participles act as the verbal head of a non-finite clause, the interpretative options they display parallel those found for the prenominal participles discussed in the previous section, be-

ing again jointly constrained by time-stability and simultaneity.⁶ With non-dynamic verbs, as in (24a-b) this is unproblematic. With dynamic verbs, time-stability can be realized in the form of gnomic readings, as in (25a), habitual readings, as in (25b), iterative readings, as in (25c), or progressive readings, as in (25d). These are the familiar solutions to the constraints imposed by the participial construction. At the same time, uses with noteworthy event interpretation are attested as well, as shown in (26).

- (24) a. There were three huge fireplaces that blazed with logs against the winter cold, and a delicious meal served by liveried foresters *wearing* heather-brown bowler hats (ICE-GB)
- b. From the west, the pass is reached from the Parks Highway by a road *winding* approximately 40 miles up the valley of Willow Creek. (Google)
- (25) a. PRITCHARD had her own ideas why Ernst was among “the criminal type” of prisoners *being exchanged* at sudden notice (ICE-GB)
- b. There must be buses *going* along Mansfield Road (ICE-GB)
- c. The chirping we heard had turned into a little scarlet bird *hopping* on a tree. (COCA)
- d. Her attention shifted momentarily from the couple *crossing* the street as she waited to make a left turn. (COCA)
- (26) The accounts given by the first prisoners (including two improbably *surrendering* to *The Scotsman*) seem to bear out the suggestion that the massive bombardment of Iraqi positions has taken its toll over the past few weeks. (ICE-GB)

An interesting use of postnominal participles is found with non-specific nominal heads, typically with the quantifier *any*. In this use, it may be impossible to assume a time-stable reading for the participial event, as is particularly obvious in (27), where *giving birth* can neither be progressive nor gnomic/habitual/iterative.

- (27) As an incentive, any woman *giving* birth to eight or more children was awarded a Gold Medal (Google)

Giving birth in (27) cannot be treated as another example of a participle with noteworthy event reading. First, it lacks the connotation of discursive prominence that characterizes the latter. Second, it still expresses sloppy simultaneity or at least close temporal succession, which is why we interpret (27) as meaning that only those women receive the medal who give birth to their eighth child in the period

⁶ This finding has been additionally checked against a 256-hit sample (i.e. 20% of the total number of hits), including false hits, from ICE-GB, using a search for any *-ing*-forms contained as zero-relative inside a noun phrase.

that medals are being awarded – those who have given birth to eight children already receive no medal, unless a ninth is born. Third, the construction conveys an event-conditional meaning: ‘if A (the participial event) happens, B (the higher clause event) follows’.

The close association of this use to quantified indefinite noun phrases indicates that the violation of time-stability is again subject to special conditions. One reason why the use can arise is probably that, in general, quantification of the nominal head can loosen aspectual constraints on the participle. This is illustrated by (28), where *migrating into Southern Germany* evokes a single bounded event but can still be thought of as ongoing at a given reference time (marked by *began speaking*) because it is replicated over the indeterminate number of agents denoted by the indefinite plural *Jews*. Possibly, the event-conditional reading of (27) above exploits the greater aspectual freedom associated with indefinitely quantified heads, in combination with the potential for sloppy simultaneity.

- (28) Yiddish is a Germanic language that came into existence around the year one thousand when Jews *migrating* into Southern Germany from Italy, South-Eastern and Central Europe began speaking a subtle blend of their Christian neighbours’ Old High German. (ICE-GB)

3.3. *Supplementives*

As illustrated in (29a), supplementive participles alternate with adjective phrases. Like supplementive adjectives, supplementive participles predicate a state of some nominal referent in the main clause, simultaneous to the main clause action. As (29b) shows, supplementive participles can also contain their own subject, yet in this case too, participles alternate with adjective phrases, and the state they predicate, this time of the supplementive’s explicit subject, is still simultaneous to the main clause action.

- (29) a. *Sceptical* by nature, *leaning* more to science than alternative therapies I approached my first Reiki session with apprehension. (Google)
 b. She looked up at Dave, her eyes *huge* and *brimming* with tears. (ICE-GB)

In accordance with this syntactic characterization, the usual battery of time-stable interpretations can be expected to appear with supplementive participles.⁷ The examples in (30) show that this expectation

⁷ This has been additionally checked against a 265-hit sample (i.e. 20% of the total number of hits), including false hits, from ICE-GB, using a search for any *-ing*-form functioning as verbal head of a zero-marked adverbial subordinate clause.

is borne out: *crossing* in (30a) suggests a progressive reading, *attaching* in (30b) a habitual reading, and *speaking* in (30c) a gnomic reading.

- (30) a. And *crossing* the Malcwa River, he added, “It used to have hippos. But now the water is very low.” (COCA)
- b. Her 1984 description of Ronald Reagan as “the Teflon President” became instant vernacular, *attaching* itself to everyone from “Teflon Tony” Blair to “Teflon Don” John Gotti. (COCA)
- c. Not *speaking* English and with three daughters, she found a way to earn a living with no welfare net. (COCA)

However, supplementive participles also allow non-time-stable interpretations. In (31a), *getting down* is simultaneous to the state of boredom evoked by the main clause, but it is hardly time-stable – rather, it presents holistically a single event that is exemplary of the state depicted by the main clause. In (31b-c), *biting* and *reaching* are neither simultaneous to the main clause action nor time-stable – instead, main clause and participle present a close sequence of actions, with the implication that these actions belong together. It would be difficult to maintain that participles as in (31) predicate a state of a nominal referent.

- (31) a. The border guards were methodical, slow, inspecting documents, vehicle registrations, driving licences, car boots. They were obviously bored, one of them even *getting* down on his knees to look under the car, grateful for the exercise. (ICE-GB)
- b. ‘He’s only doing his best to please us,’ I said, *biting* into a slice of toast and honey. (ICE-GB)
- c. *Reaching* for his binoculars, Cosmo focused them on a bonfire on top of the hill, a frieze of happy and skipping children. (ICE-GB)

The interpretation of examples as in (31) can be linked to progressive readings through ambiguous ‘bridging’ examples (cf. Brinton & Traugott 2005), as in (32a-b). Here, it is contextually unclear whether main clause and supplementive denote consecutive events, one leading up to the other, or two simultaneous events, one of which (expressed in the main clause) takes place as the other (expressed by the supplementive participle) is in progress. As with noteworthy event uses of attributive participles, the non-time-stable non-simultaneous readings of supplementive participles may be an extension of sloppy simultaneity. At the same time, they are additionally motivated by iconicity, since clausal sequentiality suggests temporal sequentiality.

- (32) a. “It is warm,” I said, *wiping* my clammy forehead, “But you’d have thought there’d be more people about”. (ICE-GB)
- b. *Thinking* this, Cosmo remembered his father. (ICE-GB)

Although the non-time-stable use of supplementary participles resembles that found in attributive participles, they are not entirely comparable. The sense of noteworthiness or of a lasting effect on the nominal referent that is characteristic of non-time-stable attributive participles is missing in non-time-stable supplementary participles. Conversely, whereas in non-time-stable supplementary participles, the process denoted by the participle still falls roughly within the time sphere of the main clause, together forming a single larger event, immediate consecution is not a requirement in attributive participles (compare examples (14)-(16) above). These differences support the idea that the non-time-stable uses are construction-specific extensions. The differences themselves may be explained in light of the contrasting grammatical functions of attributive and supplementary participles. The noteworthiness effect in non-time-stable attributive participles may come naturally to a functional slot that is concerned with referential identification, whereas the ‘single event’ sense that characterizes the relation between non-time-stable supplementary participles and the higher clause can be linked to the basic function of supplementives, namely providing the background against which the higher clause action unfolds.

3.4. Integrated participle clauses

Integrated participle clauses function as complements to a variety of complement-taking predicates, as illustrated in (33) (for an extensive discussion see De Smet *forthc.*). *Doing* and *finding* in (33a-b) resemble GOAL-arguments, supplementing their matrix predicates, *be successful* and *have trouble*. Here, the participial complement provides the process at the achievement of which the subject’s energy is directed. *Taking* in (33c) complements *have no right*, which marks deontic possibility (lack of permission).

- (33) a. Their job only is to get that indictment which they were successful *doing*. (COCA)
- b. Aunt Celeste was right: he had no trouble *finding* the beaver dam, and he was surprised to see two industrious beavers toiling away at its maintenance (COCA)
- c. I’d like to see him do hard time – long time, long sentencing – because he has no right *taking* my brother’s life. (COCA)

These complements historically derive from participles but their story is one of a gradual move away from the constructional association with adjective phrases by which participles are normally

defined. Their origin lies in 19th-century participial adjuncts as in (34a). These are themselves often a step removed from an adjectival source, largely because their adjectival alternates have been gradually replaced by adverbs marked with *-ly*. Even so, the alternation was, and still is, marginally supported in some contexts, as illustrated by (34b) (cf. Swan 2003 on Old English). Note that (34a) still displays the usual participial semantics: *humming* denotes a state ongoing at the time of the verbal action. The reanalysis to complement clause status took place in contexts where the participle combined with predicates allowing a second participant in their semantic profile. For example, *doing my chores* in (34c) can denote the activity temporally concomitant to the higher clause process *get tired* ('Hannah and John get tired as they are doing my chores') or to the higher clause subject's tiredness ('I get tired of doing my chores'). On the first reading, (34c) contains a participial adjunct; on the second reading, it contains an integrated participle clause, functioning as complement to *tired*.

- (34) a. He seemed in a better frame of mind, for he came in *humming*. (1886, CEN)
 b. The Squire came in *tired* and *mud-stained*. (1898, CEN)
 c. I hope Hannah and John do not get tired *doing* my chores. (1903, CEN)

Through reanalyses in various contexts like (34c) and through subsequent analogical extension, integrated participle clauses gradually established themselves as a minor complement type in English. Most interesting for present purposes is that, because the integrated participle clauses in (33) above do not alternate with functionally equivalent adjective phrases, their interpretation is not constrained by semantic simultaneity and time-stability. As a result, they allow a wider range of interpretations, including perfective readings. The examples in (33), all enforcing a perfective interpretation, illustrate this point. This again underscores the connection between the semantics of participles and their syntactic association with adjective phrases.

3.5. *The progressive construction and the predicative slot*

In the case of integrated participle clauses, syntactic dissociation between participles and adjective phrases results in a loosening of semantic constraints. In the case of the progressive construction, participles have likewise lost their connection to adjective phrases, having become part of a complex verb phrase with auxiliary (rather than copula) *be*. Accordingly, in the course of the history of English, the meaning of the progressive construction has both narrowed and changed. However, this has happened without violating the time-stability requirement. The overall picture of semantic change, therefore is one of further semantic specialization rather than generalization.

Of the familiar time-stable readings, the progressive reading, as in (35a), has risen to great prominence.⁸ Next, we find iterative uses for punctual verbs, as in (35b). Habitual uses appear to have specialized to denoting temporary habits, as in (35c) (cf. Kranich 2010: 32). Stative verbs are not used in the progressive construction, except again with a sense of temporariness, as in (35d) (cf. Kranich 2010: 32).⁹ Gnomic uses are missing, except if one counts the adjectival participles that can also still fill the predicative slot, as in (35e). Remarkably, however, gnomic uses are acceptable under inversion, as in (35f) (cf. Huddleston & Pullum 2002: 1385-6).

- (35) a. Great beads of sweat were *rolling* down his expansive cheeks. (COCA)
 b. His thigh was *beating* against the bar stool. (BNC)
 c. After a few minutes the clerk said she was not *answering*. (Visser 1963-73: 1938)
 d. We are *being* inconsistent, we ought to be pleased. (Visser 1963-73: 1957)
 e. That scenario is *terrifying* to Syrians. (COCA)
 f. *Complementing* the jacket is the cap, crafted of the same denim and featuring a brown suede visor. (Huddleston & Pullum 2002: 1385)

Compared to earlier stages in the English language, which are well-documented, the progressive use is not new, but other present-day uses represent innovations, while some earlier uses have disappeared. Early progressive uses are given in (36). Among the disappeared uses are those illustrated in (37). *Irnende* in (37a) is “a generality that always holds true” (Traugott 1972: 90); *flowende* in (37b) is a rare “distributive habitual” (*ibid.*); *geornlice clipigende* in (37c) denotes an intrinsic (hence stable) quality; *are feghtande* in (37d) is generic.¹⁰ These examples indicate that, in earlier stages of English,

⁸ For present-day English, our analysis has been additionally checked against a 243-hit sample of progressive constructions in ICE-GB (i.e. 5% of all instances, produced by a search on any use of *be* as progressive auxiliary). The historical analysis is informed by the existing literature.

⁹ Some interesting counterexamples exist. For instance *Paul’s always sleeping at our apartment* (Kranich 2010: 48) or *The earth is rotating around the sun* (pointed out by one of the referees of this paper). In the first example *sleeping* denotes a non-temporary habit. In the second example *rotate* denotes a stable spatial configuration of unlimited duration. It is possible that uses of this kind constitute rhetorical exploitations of the semantics of the progressive construction. In the first example, it is the addition of *always* that makes the habit non-temporary, and so it is possible that the speaker here uses *always* in contrast to the expected temporariness precisely to stress that a habit should be temporary but is not (as Kranich suggests also). Regarding the second example, the temporariness associated with the progressive construction might be exploited for a variety of reasons, e.g. to stress that the earth’s rotation is immediately observable in, as well as relevant to, the here-and-now of the speech situation (explaining why the progressive construction is livelier than the generic simple form in *The earth rotates around the sun*).

¹⁰ Although Mitchell (1976) argues that uses of this kind are no more than stylistic variants to the simple present, it is not inconceivable that the participial construction is chosen here precisely to reinforce the statelike quality of generic and stable factual statements.

the various strategies for imposing time-stability that are at present found in other participial constructions were more or less systematically available in the progressive construction as well.¹¹

- (36) a. þa ic wæs Dryhten *byddende* æt neorxna-wanes geate, þa
 when I was Lord pray-PARTICIPLE at paradise-GEN gate then
 ætywde me Michael se heahengel
 revealed me Michael DEM archangel.
 (Old English, Visser 1963-73: 1939)
 ‘when I was praying to the Lord at the gate of paradise, Michael the archangel revealed himself to me’
- b. Then upon Cristenmassenyght, þe same tyme þat Cryst was born, as þay wer ifere *disputyng* of þat sterre, a sterre come to hom bryghtyr þen any sonne (Middle English, PPCME2)
 ‘Then on the night of Christmas, the time when Christ was born, as they were arguing together about that star, a star appeared to them that was brighter than any sun’
- (37) a. of Danai þære ie, seo is *irnende* of norþdæle
 from Danai DEM river DEM is run-PARTICIPLE from northern-part
 (Old English, Traugott 1972: 90)
 ‘from Danai that river which is running (= which runs) from northern-part’
- b. þæt seo ea bið *flowende* ofer eal Ægypta land
 COMP DEM river is flow-PARTICIPLE over all Egyptian-GEN.PL land
 ‘that this river is flowing over (= floods) all Egyptian’s land’ (Traugott 1972: 90)
- c. þonne motan þa hyrdas beon swiðe wacole and geornlice
 then must DEM guards be very vigilant and readily
clipigende
 cry.out-PARTICIPLE
 (Old English, Visser 1963-73: 1933)
 ‘therefore the pastors must be very vigilant and readily cry out’
- d. Aristotill sais þat þe bees are *feghtande* agaynes hym þat will drawe þaire hony fra thaym.
 (Middle English, PPCME2)
 ‘Aristotle says that bees attack anyone who intends to take their honey from them’

¹¹ Not all Old English uses are clearly stative, however. Killie (2008: 80) points out examples such as *Her cuom micel sciphære on West Walas, & hie to anum gecierdon & wiþ Egbryht West Seaxna cynihng fighting were* (‘In this year a large army arrived in western Wales and they turned to each and every one and fought with Egbert, the West-Saxon king’), which she calls ‘narrative progressives’ and which she describes as marking “peaks in a narrative”. Examples of this type indicate that Old English had its own specialized uses of the progressive construction.

In contrast, the temporariness that now comes with stative verbs when they are used in the progressive construction is a historical innovation. Compare, for instance, *liking* in (38a), denoting a temporary state of enjoyment (connotating a sense of pleasant surprise), with Middle English *lufand* in (38b), where temporariness is missing. In fact, some stative verbs at present resist use in the progressive construction, even while their use in progressive constructions was acceptable earlier, as shown in (38c) for the use of *have* as lexical verb of possession. Presumably, they are incompatible with the sense of temporariness that has become associated with progressive constructions. The newly developed sense of temporariness might even explain why uses as in (37) above are now unacceptable.

- (38) a. Seattle and Mr. Married suddenly seemed a long way away, and she was *liking* where she'd wound up. (COCA)
- b. Now I write a sang of lufe, þat þou sal delyte in when þow ert *lufand* Jhesu Christe (Middle English, Richard Rolle, *Ego Dormio*)
 'Now I write a song of love, that you will delight in if you love Jesus Christ'
- c. næs he *hæbbende* wif ne bearn
 NEG.was he have-PARTICIPLE wife NEG child
 (Old English, Visser 1963-73: 1966)
 'he neither had (lit. was not having) wife nor child'

The origin of the temporariness effect most probably lies in the progressive use of the progressive construction. Specifically, the effect could arise from progressively used dynamic verbs and from there extend to stative verbs. When a dynamic verb is used in the progressive construction, the time-stability it evokes is an artifact of the construction, because we know that in reality the process denoted by the verb must at some point run to completion or break off. As a result, a dynamic verb that is used in the progressive construction typically predicates a state that can hold only temporarily. Presumably, the more prominent its progressive use, the more strongly the progressive construction came to be associated with temporariness, until temporariness became part of its meaning and came to hold also for stative verbs when used in the progressive construction. The fact that Present-day English allows gnomic uses under inversion, as in (35f) above, elegantly fits this account, since we would expect the semanticization of temporariness to be construction-specific.

Again, semantic and syntactic dissociation are linked. What is intriguing, however, is that syntactic dissociation leads to loss of constraints (generalization) in the case of integrated participle clauses, but only to further semantic specialization in the case of the progressive construction. Possibly, it is systemic pressures that can account for this. Both in Old English and in Present-day English, verbs can predicate of their own accord. This suggests that if a verb is participialized and embedded in an adjectival predicative slot, dominated by the verb *be*, the main motivation on the part of the speaker is not

to exploit the syntactic potential of adjectival predication – after all, a verb could predicate anyway. Rather, the primary reason for letting a verbal form occupy an adjectival position must have been to exploit the adjectival construction’s semantics. In other words, imposing time-stability has in all likelihood always been the very point of the construction. This time-stable quality is moreover reinforced by the stative verb *be*, which codes a temporally extended state, the specifics of which are elaborated by its complement (cf. Langacker 1987: 304 on ‘elaboration sites’). Finally, once the construction exists, it might no longer matter whether or not the adjectival slot remains recognizable, because the alternation between the progressive construction and unmarked simple verb forms automatically forces the former into a sufficiently distinctive functional niche.

4. Conclusions

Earlier characterizations of the English present participle have focused on the simultaneity or on the progressive meaning it can express, but have had to recognize that neither meaning generalizes easily to all uses. Not only generalization has proven elusive, however. The full richness of participial semantics has been underestimated.

In this paper we have argued that in terms of the temporal and aspectual meanings they convey, participles largely fall into a restricted set of uses. These uses transcend the different constructions participles are found in and they are broadly predictable from the single assumption that for the majority of cases participles fill an adjectival slot that constrains their interpretation. More precisely, general constraints specify that, like adjectives, a participle must denote a state and that this state must be simultaneous to some contextually available reference time. Since not all verbs naturally denote states, there are various interpretation strategies to accommodate the time-stability and simultaneity requirements. Interpreting the participial process progressively is one of these, but participles may also be given iterative, habitual or gnomic readings. The choice between these readings is contextually determined, depending both on lexical cues and on how the participial event can be linked to other events in the discourse.

The connection between participle and adjective phrase may become opaque. This is demonstrably so for integrated participle clauses, which can be shown to have a clearly distinct syntactic status, not alternating with functionally equivalent adjectives. Where the connection between participle and adjective phrase is lost, interpretations are found to be no longer constrained by the meanings imposed by the adjectival slot. Thus, the complement slot filled by integrated participle clauses does not impose a time-stable or simultaneous reading on the participial event.

In other constructions, the meanings conveyed by the participle are allowed to stray from the adjectival template. These semantic extensions are construction-specific and each time serve a particular rhetorical purpose. In pre- and postnominal attributive participles, the participle can be used to

mark an event as noteworthy, under which circumstances time-stability and simultaneity can be violated. Postnominal participles to non-specific heads can be exploited to express a conditional relation between the participial event and the higher clause event, involving quick succession. In supplementives, the participle can be exploited to present a bounded event as being intimately linked to the higher clause event, typically creating an iconic rendition of immediate temporal succession. The progressive construction, finally, has specialized to encode progressive/iterative meanings, temporary habits and temporary states, losing gnomic and (neutrally) habitual uses, while semanticizing the temporariness implicature. In each case, these exceptional meanings can be linked to other participial uses in the same constructions, suggesting possible pathways of change, yet since they cannot be linked directly to the semantics of adjective phrases, their existence again indicates a decrease in the transparency of the participle-adjective relation.

It is possible, then, to generalize over the meaning of participles, describing their basic senses and the conditions under which these arise. Added to the basic stock of possible interpretations is a set of specialized uses violating the primary generalization in ways particular to each participial construction. However, because the violations are constrained, the interpretative possibilities of participles are limited.

CORPORA

COCA = *Corpus of Contemporary American English*

BNC = *British National Corpus*

ICE-GB = *International Corpus of English – Great Britain*

CB = *Collins Cobuild Corpus*

PPCME2 = *Penn-Helsinki Parsed Corpus of Middle English (2nd edition)*

SOURCES OF INTERNET EXAMPLES

- (2) <http://www.scientificamerican.com/podcast/episode.cfm?id=bursting-bubbles-beget-itty-bitty-b-10-06-09> (24 November 2010)
- (13) a. *Forestry Abstracts* 1974, Vol. 35, No 9, p.244 (accessed through *Google Books* on 1 December 2010)
- b. <http://www.wv2australia.gov.au/underattack/sydneyharbour.html> (24 November 2010)
- c. <http://damesandbroads.blogspot.com/2009/04/broad-of-month-kathy-griffin.html> (24 November 2010)

- d. <http://www.abc.net.au/news/stories/2004/03/18/1068268.htm> (24 November 2010)
- e. <http://hbr.org/2001/05/four-rules-for-taking-your-message-to-wall-street/ar/1> (24 November 2010)
- (14) <http://www.guardian.co.uk/world/2006/aug/03/cuba.duncancampbell12> (24 November 2010)
- (15) <http://www.independent.co.uk/news/world/nices-mayor-reappears-1499186.html> (24 November 2010)
- (16) <http://www.nytimes.com/1994/11/13/magazine/back-of-beyond-in-peru.html?pagewanted=2> (24 November 2010)
- (18) W. Gray, *You and Your Wedding* (accessed through *Google Books* on 1 December 2010)
- (20) <http://law2.fordham.edu/publications/articles/400flspub14007.pdf> (24 November 2010)
- (21) a. http://www.pnwlocalnews.com/south_king/ren/news/87157707.html (1 December 2010)
- b. <http://willowglen.ning.com/forum/topics/whats-the-big-draw-at-opa> (24 November 2010)
- (23) a. W.S. Maugham, *Of Human Bondage* (accessed through *Google Books* on 1 December 2010)
- b. J. London, *The Sea Wolf* (accessed through *Google Books* on 1 December 2010)
- (24) b. <http://www.facebook.com/pages/Hatcher-Pass/105913312775535> (24 November 2010)
- (27) <http://www.mazal.org/archive/documents/Franzblau/Franzblau01/FRA01.htm> (24 November 2010)
- (29) a. http://www.healing-naturally.co.uk/about_reiki.htm (24 November 2010)

REFERENCES

- Brinton, Laurel J. and Elizabeth C. Traugott. 2005. *Lexicalization and language change*. Cambridge: Cambridge University Press.
- Bybee, Joan L. and John L. McClelland. 2005. Alternatives to the combinatorial paradigm of linguistic theory based on domain general principles of human cognition. *The Linguistic Review* 22: 381-410.
- Bybee, Joan L. 1985. *Morphology. A study of the relation between meaning and form*. Amsterdam: John Benjamins.
- Croft, William. 1991. *Syntactic categories and grammatical relations*. Chicago: University of Chicago Press.
- Croft, William. 2001. *Radical construction grammar. Syntactic theory in typological perspective*. Oxford: Oxford University Press.
- Declerck, Renaat. 1988. *Studies on Copular Sentences, Clefts and Pseudo-clefts*. Leuven: Leuven University Press.

- Declerck, Renaat. 1991a. *A Comprehensive Descriptive Grammar of English*. Tokyo: Kaitakusha.
- Declerck, Renaat. 1991b. *Tense in English. Its Structure and Use in Discourse*. London: Routledge.
- De Smet, Hendrik. 2010. English -ing-clauses and their problems. The structure of grammatical categories. *Linguistics* 48: 1153-1193.
- De Smet, Hendrik. Forthcoming. *Spreading constructions. Diffusional change in the English system of complementation*. Oxford: Oxford University Press.
- De Smet, Hendrik. In preparation. Participial perception verb complements. Meaning and syntax.
- De Smet, Hendrik and Liesbet Heyvaert. 2009. The meaning of -ing. Semantics and pragmatics. Paper presented at the *3rd International Conference on the Linguistics of Contemporary English*, London, 14-17 July 2009.
- Goldberg, Adele E. and Alex Del Giudice. 2005. Subject auxiliary inversion. A natural category. *Linguistics Review* 22: 411-428.
- Goldberg, Adele E. and Ray Jackendoff. 2004. The English resultative as a family of constructions. *Language* 80: 532-568.
- Givón, Talmy. 1984. *Syntax*. Vol. 1. Amsterdam: John Benjamins.
- Heyvaert, Liesbet. 2008. On the constructional semantics of gerundive nominalizations. *Folia Linguistica*, 1(42), 39-82.
- Houston, Ann. 1985. *Continuity and change in English morphology. The variable (ING)*. Doctoral dissertation. University of Pennsylvania.
- Huddleston, Rodney and Geoffrey K. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Jespersen, Otto. 1940. *A Modern English grammar on historical principles*. Vol. 5. *Syntax*. London: George Allan & Unwin.
- Jespersen, Otto. 2006 [1933]. *Essentials of English Grammar*. London: Taylor & Francis.
- Killie, Kristin. 2008. From locative to durative to focalized? The English progressive and ‘PROG imperfective drift’. In Maurizio Gotti, Marina Dossena & Richard Dury (eds.). *English Historical Linguistics 2006. Syntax and Morphology*. Amsterdam: John Benjamins. 69-88.
- Kranich, S. 2010. *The progressive in Modern English. A corpus-based study of grammaticalization and related changes*. Amsterdam: Rodopi.
- Labov, William. 1989. The child as linguistic historian. *Language Variation and Change* 1: 85-94.
- Langacker, Ronald W. 1987. *Foundations of Cognitive Grammar. Theoretical Prerequisites*. Stanford: Stanford University Press.
- Langacker, Ronald W. 1991. *Foundations of Cognitive Grammar. Descriptive Application*. Stanford: Stanford University Press.
- Mitchell, Bruce. 1976. Some problems involving Old English periphrases with *beon/wesan* and the present participle. *Neuphilologische Mitteilungen* 77: 478-91.

- Smith, Michael B. and Joyce Escobedo. 2002. The semantics of to-infinitival vs. *-ing* verb complement constructions in English. In M. Andronis, C. Ball, H. Elston, and S. Neuvel (eds.). *Proceedings from the main session in the Chicago Linguistic Society's thirty-seventh meeting*. Chicago: Chicago Linguistic Society. 549-564.
- Strang, Barbara M.H. 1982. Some aspects of the history of the BE + ING construction. In John Andersen (ed.). *Language form and linguistic variation. Papers dedicated to Angus McIntosh*. Amsterdam: John Benjamins. 427-474.
- Swan, Toril. 2003. Present participles in the history of English and Norwegian. *Neuphilologische Mitteilungen* 104: 179-195.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech & Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Traugott, Elizabeth C. 1972. *A history of English syntax*. New York: Holt, Rinehart and Winston.
- Visser, Frederikus Theodorus. 1963-73. *An historical syntax of the English language*. Leiden: Brill.
- Wierzbicka, Anna. 1988. *The semantics of grammar*. Amsterdam: John Benjamins.